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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/530,952

12/15/2005

Gunther Burghardt

915-006.074

2243

4955 7590 11/15/2007  
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EXAMINER

PHILLIPS, FORREST M

ART UNIT

PAPER NUMBER

2837

MAIL DATE

DELIVERY MODE

11/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/530,952

Applicant(s)

BURGHARDT, GUNTHER

Examiner

Forrest M. Phillips

Art Unit

2837

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/8/05</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 rejected under 35 U.S.C. 103(a) as being unpatentable over  
(US 5092424),  
Schreiber (US 2092424).

With respect to claim 1 Schreiber discloses a sound generating apparatus comprising:

A first cavity (V'1 in figure 8) a second cavity (V'2 in figure 8) and an electro-mechanical transducer (12' in figure 8) for exciting sound waves in said first cavity and said second cavity;

A third cavity (V'3 in figure 8) wherein said third cavity is connected to said first cavity via at least one first passage (p'1 in figure 8) of predefined shape, and said third cavity is connected to said second cavity via at least one second passage (p'2 in figure 8) of predefined shape, said third cavity having one or more outlets (p'3 in figure 8) allowing sound waves to radiate into the exterior of said apparatus; wherein said sound generating apparatus also provides for acoustical amplification in a high frequency range, wherein said high frequency range amplification is in a frequency range between 850 Hz and 7kHz (It can be seen from the figures there is an amplification of high frequency sounds, the frequency values have been omitted).

Regarding the range of 850 Hz to 7Khz such a range would have been obvious to one of ordinary skill in the art since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233. It is known that this includes the range in which human hearing is most sensitive.

Attention directed to (Column 2 lines 30-35).

With respect to claims 2-5 Examiner considers the ranges claimed to be optimization which would have been obvious to one of ordinary skill in the art. See In re Aller.

With respect to claim 6 Schreiber further discloses wherein said electromechanical transducer has a main direction for emitting sound and a supplementary direction for emitting sound, wherein waves emitted along said main direction are radiated into said first cavity (V'1) and sound waves emitted along said supplementary direction are radiated into said second cavity (V'2). Examiner considers the "front" of a speaker is generally considered the primary direction of sound propagation.

With respect to claim 7 Schreiber further discloses wherein said first cavity has a first volume and said second cavity has an essentially bigger second volume (refer to figure 8).

With respect to claim 8 Schreiber discloses the invention as claimed except wherein the first and third volumes have approximately the same volume. It would have been obvious to one of ordinary skill in the art to select such sized chambers in order to

tune the apparatus as a matter of obvious design choice. (refer again to Column 2 lines 30-35) Examiner considers that it would have been obvious to one of ordinary skill to select any ratio of volumes as was required by the intended frequency of sounds.

With respect to claim 9 Schreiber further discloses wherein said first cavity and said second cavity are arranged adjacent to each other, and said first cavity and said second cavity are spatially separated from each other by said electro-mechanical transducer (see figure 8).

With respect to claim 10 Schreiber further discloses wherein said electro-mechanical transducer is a loudspeaker (see figure 8).

With respect to claim 11 Schreiber discloses the invention as claimed except wherein said apparatus is suitable for being implanted in a portable electronic device. Examiner considers this to be an obvious intended use of the apparatus, and it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ F.2d 1647

With respect to claim 12 Schreiber discloses the invention as claimed except wherein the sound generating apparatus is part of a mobile electronic device. Examiner considers this to be an obvious intended use of the apparatus, and it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus

satisfying the claimed structural limitations. Ex Parte Masham, 2 USPQ F.2d 1647 (1987).

With respect to claim 13 Schreiber discloses a system for generating sound comprising

A first cavity (V'1 in figure 8) a second cavity (V'2 in figure 8) and an electro-mechanical transducer (12' in figure 8) for exciting sound waves in said first cavity and said second cavity;

A third cavity (V'3 in figure 8) wherein said third cavity is connected to said first cavity via at least one first passage (p'1 in figure 8) of predefined shape, and said third cavity is connected to said second cavity via at least one second passage (p'2 in figure 8) of predefined shape, said third cavity having one or more outlets (p'3 in figure 8) allowing sound waves to radiate into an exterior of said system; wherein said system for generating sound also provides for acoustical amplification in a high frequency range, wherein said high frequency range amplification is in a frequency range between 850 Hz and 7kHz ().

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to form 892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Forrest M. Phillips whose telephone number is

Application/Control Number:  
10/530,952  
Art Unit: 2837

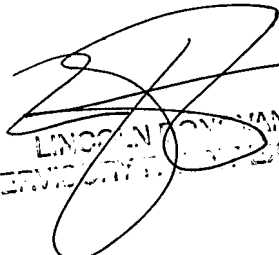
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5712729020. The examiner can normally be reached on Monday through Friday 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 5712721988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

FP

  
LINCOLN DONOVAN  
SUPERVISING EXAMINER